

MAKAROV, P.O.

USSR/Medicine - Neurology

Page 1/1 : Pub. 71 - 13/2

Author : Makarov, P. O., Doctor of Biological Sci.

Title : Pain and anaesthetization

Periodical : Nauch i Shizn' 8, 30-32, Aug 1954

Abstract : Analysis of the sensation of pain and its causes is given.
Methods for pain elimination (anaesthetization, local or general),
are described. Illustrations.

Institution :

Submitted :

MAKAROV, P.O.

~~Functional lability and the chronotope of human analysore. Uch.sap.~~
Len.un. no.164:151-174 '54. (MLBA 10:3)
(SENSES AND SENSATION)

MAKARCH, P.O.

Dynamics of reflex transformation in the excitability and lability
of human analysers. Uch.zap.Len.un.no.176:297-318 '54.(MIRA 9:9)
(REFLEXES) (CONDITIONED RESPONSE) NERVOUS SYSTEM)

MAKAREV, P.O.

USSR/Optics - Physiological Optics.

K-9

Abs Jour : Referat Zhur - Fizika, No 3, 1957, 8057

Author : Gol'dburt, S.N., Makarov, P.O.

Inst : Leningrad State University, USSR.

Title : Investigation of Dark Adaptation to Short Light Stimuli.

Orig Pub : Probl. fiziol. optiki, 1955, 11, 236-254

Abstract : The curve of dark adaptation was plotted with the aid of short light flashes, which were projected at a distance from 5 to 10° from a central hole in the form of a spot 3° and 16 minutes in diameter. The measurements were carried out by two methods: (1) At fixed intensity of flash, the threshold of visibility was reached by changing its duration; (2) At a fixed duration of flash, bringing it to the visibility threshold by reducing the intensity.

Card 1/1

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MAKAROV, P.O.

Reports on biophysics at the eighth All-Union Congress of Physiologists
Biochemists, and Pharmacologists. Usp. sovr. biol. 40 no.3:379-383
H-D '55. (MLRA 9:4)

(BIOPHYSICS--CONGRESSES)

USSR/Medicine - Physiology

FD-2695

Card 1/1

Pub. 33-4/28

Author : Makarov, P. O.

Title : Thirst as a complex unconditioned reflex and changes in the excitability of the brain centers

Periodical : Fiziol. zhur. 41, 25-30, Jan-Feb 1955

Abstract : Recorded EEG during chemical stimulation of the receptors of the human stomach with NaCl. Established the time of onset of thirst and its development, comparing the amount of water required to quench the thirst of the human being experimented on, and the amount actually drunk by him. Determined changes in the excitability of the nerve centers of the brain by the method of adequate optical chronaximetry during development of thirst and during slaking of thirst. Diagram; graphs. Eleven references, 8 of them USSR (7 since 1940)

Institution : Laboratory of Analyser Physiology of the Physiologic Institute
imeni A. A. Ukhtomskiy of the Leningrad State University imeni
A. A. Zhdanov

Submitted : July 5, 1953

USSR / Human and Animal Physiology. The Nervous System. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41746.

Author : Makarov, P. O.

Inst : Not Given.

Title : Conditioned Reflex Alterations of the Functional State of the Optic Analyzer and the Electroencephalograms in Man.

Orig Pub: Probl. sovr. fiziol. nervn. i myshechn. sistemi. Tbilisi. AN GruzSSR, 1956, 361-371.

Abstract: By associating in experiments in man of a brief light stimulus, measured by its intensity, duration and area and producing changes in the excitability in the illuminated and nonilluminated eye,

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USSR / Human and Animal Physiology. The Nervous System. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41746.

Abstract: with a conditioned mechanical or electrocutaneous stimulus, the author observed a condition "attuned" reflex which consisted in the alteration of the excitability of the optic analyzer in answer to the action of the conditioned stimulus. There, alterations in the optic analyzer were characterized by selectivity, as a result of which the effects of those stimuli possessing a definite correlation of intensity and duration were the most markedly affected. Conditioned reflex reactions were observed as a feature of "attuned reflexes" in view of the depression of the α -rhythm observed by the association of a jet of air, causing blinking, with the illumination. -- Ye. N. Sokolov.

Card 2/2

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MAKAROV, P.O.

[Neurodynamics of man; excitability, lability, and adequacy of
internal analysors] Neyrodinamika cheloveka; vzbudimost',
labil'nost' i adekvatnost' vnutrennikh analizatorov. Leningrad,
Medgiz, 1956. 213 p. (MLRA 10:5)
(Psychology, Physiological)

MAKAROV, P.O.

The problem of inhibition; according to materials of the Second
Gagry Conference. Vest.Len.un.11 no.9:91-97 '56. (MLRA 9:8)
(Inhibition)

MAKAROV, P.O.

Conference devoted to the problems of inhibition and sleep therapy.
Vest.Len.un.11 no.9:113-114 '56. (MLBA 9:8)
(Inhibition) (Sleep--Therapeutic use)

USSR/Human and Animal Physiology - The Nervous System.

T

Abs Jour : Ref Zhur Biol., No 3, 1959, 13167

Author : Makarov, P.O.

Inst : AS USSR

Title : Adequacy and the Act of Inhibition in Reflex Activity of Man

Orig Pub : V sb.: Probl. fiziol. tsntz. nervn. sistemy M.-L., AN SSSR, 1957, 352-359

Abstract : For stimulation of the substrate in a given functional state stimuli of a definite character (force and rhythm) are adequate. Stimuli inadequate for a given condition elicit inhibition. Adequate stimuli evoke a responsive reaction with a minimum of energy consumption. Every unconditioned and conditioned reflex is a selection reaction of the nervous system where one of its elements is

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USSR/Human and Animal Physiology - The Nervous System.

T

Abs Jour : Ref Zhur Biol., No 3, 1959, 13167

stimulated and the other is suppressed. Adequacy of the stimulus rests on the basis of the selective reaction. Arising from this, by apportionment of the electrical stimulus it is possible to selectively stimulate one or the other of the interbedded receptors, particularly, the salivary or tactile receptors of the tongue of man. For a single fiber the minimum threshold of intensity starts at 100 imp/sec, for the visual analyzer - 25, cutaneous - 80, acoustic - 60 - 80, for interoceptors of the stomach - 30 - 40. Determination of differential stimulation of analyzers with the aid of adequate stimuli showed a decrease in excitability of the brain cortex in illnesses such as ulcerative conditions and the re-occurrence and recovery. -- A.M. Ryabinovskaya

Card 2/2

MAKAROV, P.O.

Critical interval of the discreteness of nerve centers of the human brain as observed by studying conditioned reflex changes in the electroencephalogram and indications of the second signal system. Nauk zap. Kyiv. un. 16 no.17:151-160 '57.

(MIRA 13:2)

(BRAIN)

MAKAROV, P.

20-1-61/64

AUTHOR

MAKAROV, P.O.

TITLE

- Adequacies in the Physiology of the Individual Development of Man
(Adekvata v fiziologii individualnogo razvitiya cheloveka - Russian)
Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 220-222 (U.S.S.R.)

PERIODICAL

ABSTRACT

During the ontogenetic development, the physiological functions of the human organism are subjected to changes- with respect to circulation, metabolism, secretion etc. The same applies to the activity of the so-called animal system of the organs (motive and nervous apparatus). The paper under review deals with the question how, during the above process of the individual development, the excitabilities change, i.e. the reactions of the organism to the so-called signals of its environment. The paper reaches very interesting conclusions, among others the following: the reactivity (irritableness) of the organism corresponds to the three stages of its age, namely from 0 to 20 years, from 20 to 30 years, and above 30 years. The sensitivity can be determined with the aid of the method of the optical adequatometry. The organism: the age level between 20 and 30 years shows the most intense reactivity. This capacity decreases below 20 years and above 30 years. The maximum sensitivity of the nervous centres of the human organism was determined to lie between the 25th and 30th year. The excitability is differentiated and is closely connected with the metabolism. Metabolism is influenced by the above-mentioned age levels in human life.
(2 diagrams)

Card 1/2

Adequacies in the Physiology of the Individual Development of 20-1-61/64
Man.

ASSOCIATION Not Given.

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Card 2/2

MAKAROV, P.O.

Mechanical excitability of a nerve in the region of an electrotonus and perielectrotonus. Uch. zap. LGU no.222:48-60 '57. (MIRA 10:8)

1. Laboratoriya fiziologii analizatorov Fiziologicheskogo instituta
Leningradskogo Gosudarstvennogo universiteta,
(NERVOUS SYSTEM) (ELECTROPHYSIOLOGY)

MAKAROV, Petr Osipovich, red.

[Adequatometry] Adekvatometriia. Leningrad, Medgiz, 1958.

255 p.

(MIRA 13:7)

(PHYSIOLOGICAL APPARATUS)

MAKAROV, P.O.; VENS LAUSKAS, M.I.

Relation of the critical discretion interval of color vision in man to the strength, duration, and spatial distribution of stimulation; chronotope and functional lability of color vision [with summary in English]. Biofizika 3 no.6:693-697 '58. (MIRA 12:1)

1. Fiziologicheskiy institut im. A.A. Ukhomsnogo Leningradskogo universiteta.

(COLOR VISION, physiol.

relation of critical discretion interval to duration, force & spatial aspects of stimulus (Rus))

MAKAROV, P.O.

~~Microinterval analysis of individual differences in human higher nervous activity [with summary in English]. Vop. psikhol. 4 no.1: 77-86 Ja-7 '58. (MIRA 11:3)~~

1. Fiziologicheskiy institut im. akad. A.A. Ukhtomskogo pri Leningradskom gosudarstvennom universitete.
(Psychology, Physiological)

MAKAROV, P.O.

Reflex variations in the excitability of the human visual analyzer produced through cortical induction at fixed intervals. Probl. fiziol.opt. 12:100-111 '58 (MIRA 11:6)

1. Laboratoriya fiziologii analizatorov Fiziologicheskogo instituta im. akad. A.A. Ukhomskego pri Leningradskom ordena Lenina universitete im. A.A. Zhdanova.
(OPTICS, PHYSIOLOGICAL)
(CONDITIONED RESPONSE)

MAKAROV, P.O., KESAREVA, Ye.P., RAKHMELEVICH, L.S., TROFIMOV, I.G.,

Nikolai Aleksandrovich Iudenich; an obituary. Fiziol.zhur. 44 no.6:606
Je '58 (MIRA 11:7)

(IUDENICH, NIKOLAI ALEKSANDROVICH, 1900-1958)

MAKAROV, P.O.

~~CONFERENCE IN MEMORY OF N.E. VVEDENSKII~~
Conference in memory of N.E. Vvedenskii. Usp.sovr.biol. 45
no.2:252-259 Mr-Apr '58 (MIRA 11:6,
(VVEDENSKII, NIKOLAI EVGEN'EVICH, 1852-1922)
(PHYSIOLOGY)

MAKAROV, P. O. (DR.)

The preliminary program of the Electromyography (EMG) Conference to be held at Lubkovice, near Brno, on 24 - 26 September 1959 with international participation is as follows:

1. Prof. Dr. O. O. *Penin* (Moscow, USSR): Mechanics of EMG Registration.
2. Dr. V. Ohta (Munster, Western Germany): Forces and Conditions of the Leads of Intravital Potentials.
3. Dr. L. V. *Shvachkin* (Tbilisi, USSR): Basic Mechanical Faults in Great Clinical Electromyography and the Way to their Elimination.
4. Dr. M. *Shvachkin* (Moscow, USSR): Central Regulation of Electromyography.
5. Dr. I. M. *Arshavsky* (Tver, USSR): On the Problem of Electromyography in E-Myo.
6. Dr. L. V. *Shvachkin* (Tbilisi, USSR): Functional Limits of the Action in E-Myo.
7. Dr. M. A. *Alievskiy* (Tver, USSR): Changes of the EMG Wave in Man.
8. Dr. B. I. *Malik-Shaym* (Tver, USSR): *Changes of the EMG Wave in Man*.
9. Dr. B. I. *Malik-Shaym* (Tver, USSR): EMG in Glaucoma.
10. Dr. B. I. *Malik-Shaym* (Tver, USSR): EMG in Chorioiditis.
11. Dr. M. *Shvachkin* (Moscow, USSR): Electromyography and Neurophysiology at the Ophthalmologic Clinic.
12. Prof. Dr. B. I. *Malik-Shaym* (Tver, USSR): Prof. Dr. B. I. *Malik-Shaym* (Tver, USSR): EMG in Diseases of the Eye.
13. Dr. P. O. *Makarov* (Leningrad, USSR): Adequacy of the Right Analyzer in Healthy and Ill Man.
14. Dr. M. *Arshavsky* (Tver, USSR): Acoustic Nerve Optic in EMG.

MAKAROV, Petr Osipovich

[Methods for neurodynamic investigations and a practicum on the
physiology of human analyzers] Metodiki neirodinamicheskikh
issledovaniy i praktikum po fiziologii analizatorov cheloveka.
Moskva, Vysshaya shkola, 1959. 268 p. (MIRA 13:9)
(NERVOUS SYSTEM)

MAKAROV, P.O.

Problems in human adequatometry and neurodynamics. Vest.
LGU 14 no.3:118-119 '59. (MIRA 12:5)
(VISION)

GULYAYEV, P.I.; MAKAROV, P.O., prof., nauchnyy red.; VOROB'YEV, O.S.,
red.izd-vs; GURDZHIYEVA, A.M., tekhn.red.

[The brain and electronic machines] Mozg i elektronnaia mashina.
Leningrad, Ob-vo po raspr. polit. i nauchn. znaniy RSFSR, 1960.
45 p.

(BRAIN)

(CYBERNETICS)

(MIRA 13:12)

MAKAROV, P.O.

Investigation of human visual dark adaptation in the chronotype (in the parameters of force, duration, and space). Nerv. sist. no.1: 144-155 '60. (MIRA 13:9)

1. Laboratoriya fiziologii analizatorov, Leningradskiy ordena Lenina gosudarstvennyy universitet im. A.A. Zhdanova.
(EYE—ACCOMODATION AND REFRACTION)

MAKAROV, P.O.

Effect of extremely strong optical stimuli on the visual, auditory,
and cutaneous analyzers in man. Biofizika 5 no. 6:677-684, '60.
(MIRA 13:10)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.
(LIGHT—PHYSIOLOGICAL EFFECT) (SENSES AND SENSATION)

MAKAROV, P.O.; KROL', T.M.

Role of the intensity, duration and space (dchronotope) factors
in determining the excitability of the human visual analyzer.
Biofizika 5 no. 6:691-696 '60. (MIRA 13:10)

1. Leningradskiy ordena Lenina gosudarstvennyy universitet imeni
A.A. Zhdanova.

(VISION)

. MAKAROV, P.O. (Leningrad)

Problems in the biophysics of sense organs. Usp. sov. biol. 50
no.3:337-348 N-D '60. (MIRA 14:3)
(SENSES AND SENSATION)

MAKAROV, P.O.; KROL', T.M.

Biophysics of excitation Sensomotor adequatometry in human subjects.
Biul. eksp. biol i med. 50 no.12:48-51 D '60. (MIRA 14:1)

1. Iz laboratorii biofiziki organov chuvstv kafedry biofiziki (zav. -
prof. P.O. Makarov) Leningradskogo ordena Lenina gosudarstvennogo
universiteta imeni A.A. Zhdanova. Predstavlena akademikom V.N.
Chernigovskim.

(NERVOUS SYSTEM)

BEREZINA, Mariya Pavlovna; VASILEVSKAYA, Natal'ya Yefimovna; AVERBAKH, Mikhail Solomonovich; VETUKOV, Ivan Alekseyevich, dots.; GOLIKOV, Nikolay Vasil'yevich; GULYAYEV, Pavel Ivanovich; ZHUKOV, Yevgraf Konstantinovich; LATMANIZOVA, Lyudmila Vladimirovna; MAKAROV, Petr Osipovich; NIKITINA, Iya Pavlovna; SPERANSKAYA, Yekaterina Nikolayevna; VASIL'YEV, L.L., prof., red.; PEREDEL'SKAYA, N.M., red.; PARSADANOVA, K.G., red. 1st-ed.; GRIGORCHUK, L.A., tekhn. red.

[Comprehensive laboratory manual of human and animal physiology] Bol'shoi praktikum po fiziologii cheloveka i zhivotnykh. Izd.2., ispr. i dop. Moskva, Gos. izd-vo "Vysshaia shkola," 1961. 674 p. (MIRA 14:8)
(PHYSIOLOGY—LABORATORY MANUALS)

MAKAROV, P.O.

Evaluation of the functional state of the human nervous system
(its adequacy and labilization). Trudy 1-go MMI 11:173-184 '61.
(MIRA 15:5)
1. Kafedra fiziologii (sav. - prof. L.L.Vasil'yev) Leningradskogo
gosudarstvennogo universiteta.
(NERVOUS SYSTEM)

MAKAROV, P.O.

Biophysics at the Leningrad University. Vest LCU 16 no.21:156-
159 '61. (1961:11)

(Leningrad--Biophysics-- Research)

MAKAROV, P.O.

Biophysical research and techniques used in some university laboratories of England. Trudy Len. ob-va est. 72 no.1:142-144 '61.
(MIRA 15:3)

(GREAT BRITAIN--BIOPHYSICS--RESEARCH)

MAKAROV, P.O.

Problems in the biophysics of sense organs; general adequateness
theory of the activity of sense organs. Trudy Len. ob-va est.
72 no.1:139-142 '61. (MIRA 15:3)
(BIOPHYSICS) (SENSES AND SENSATION)

1. 6. 1971, 1971.

Discretometry of human and mouse. Nerv. sist. 1971, no. 3:125-134.

1. Kafedra biofiziki fiziologicheskogo Instituta imeni N. P. Pavlova
Leningradskogo gosudarstvennogo universiteta.

MAKAROV, P.O.; NEVSKAYA, A.A.

Biophysics of neural signaling. Biul. eksp. biol. i med. 3[i.e.53]
no.3:3-7 Mr '62. (MIRA 15:4)

1. Iz laboratorii biofiziki organov chuvstv kafedry biofiziki (zav. -
prof. P.O.Makarov) Leningradskogo ordena Lenina gosudarstvennogo
universiteta imeni A.A.Zhdanova. Predstavlena deystvitel'ny:
chlenom AMN SSSR V.V.Parinym.
(NERVOUS SYSTEM)

VERZILIN, Nikita Nikolayevich; D'YAKONOVA-SAVEL'YEVA, Ye.N., red.;
VASIL'YEV, L.L., red.; IVANOV, A.V., red.; KOLOSOV, N.G., red.;
MAKAROV, P.O., red.; POLKANOV, A.A., red. [deceased]; POLYANSKIY,
YU.I., red.; STEPANOV, D.L., red.; SHVETSOVA, E.M., red.;
YASHCHURZHINSKAYA, A.B., tekhn. red.

[Cretaceous sediments in the northern part of the Fergana Valley
and their oil potential] Melcnye otlozheniya severa Ferganskoi
vpadiny i ikh neftenosnost'. Leningrad, Gostoptekhnizdat,
1963. 219 p. (Leningradskoe obshchestvo estestvoispytatelei.
Trudy, vol. 70, no.2). (MIRA 16:12)

KRYUKOV, B.I.; MAKAROV, P.O.

Problem of double signalization in the model study of
nervous activity. Prim. nat. metod. v biol. no.2:52-59
'63. (MIRA 16:11)

MAKAROV, P.O., prof.

Further studies of direct and reverse masking in the activity
of the sense organs. Nerv. sist. no.4:71-75 '63 (MIRA 18:1)

1. Fiziologicheskii Institut i kafedra biofiziki Leningradskogo
universiteta.

MAKAROV, P.O.

Three forms of the relation of the hearing threshold to its
duration. Biofizika 8 no.1:69-76 '63. (MIRA 17:8)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

MAKAROV, P.O., LONSKIY, A.V.

Adequatometer for measuring the dynamic characteristics of
vision and hearing in man. Biofizika 8 no.2:255-257 '63.

(MIRA 17:10)

1. Kafedra biofiziki Leningradskogo gosudarstvennogo universiteta
im. A.A. Zhdanova.

MAKAROV, P.O.

Problem of the reflection of moving and immobile optic stimuli.
Vest.LGU 18 no.3:115-120 '63. (MIRA 16:2)
(VISION)

MAKAROV, S.M.; BARTASH, A.N.; TARAN I.Ye.; KOKASHINSKIY, I.I.

Application of the gastric juice of horses in treating
young animals. Veterinariia 40 no.4:65-66 Ap '63.

(MIRA 17:1)

1. Starshiy veterinarnyy vrach Upravleniya veterinarii
Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh
produktov BSSR (for Makarov). 2. Glavnyy veterinarnyy vrach
Sovkhoza "Shatilki", Svetlogorskogo rayona, Gomel'skoy
oblasti (for Bartash). 3. Glavnyy veterinarnyy vrach
Poleskoy sel'skokhozyaystvennoy opytnoy stantsii (for
Taran). 4. Glavnyy veterinarnyy vrach Svetlogorskogo
proizvodstvennogo upravleniya Belorusskoy SSR. (for Kokashinskiy).

1. General

Study of the
in the
no. 5:1 - 5:1

1. General
1. General
1. General

MAKAROV, P.O.; LONSKIY, A.V.; SOKOV, B.N.

Effect of ultrasound on a single stretch receptor. Biofizika
9 no.4:523-526 '64. (MIRA 18:3)

1. Kafedra biofiziki Leningradskogo gosudarstvennogo universiteta
imeni Zhdanova.

MAKAROV, P.O.

Chronotope; interrelations of time and space in the neurodynamics
of man. Vop. psikhol. 10 no.2:79-86 Mr-Apr '64.

(MIRA 17:9)

1. Kafedra biofiziki gosudarstvennogo universiteta, Leningrad.

MAKAROV, P.O.; LINENKO, V.I.

Biophysics of the sense organs and psychopharmacology as exemplified by the action of some pharmacological preparations on acoustic and visual analysors in man. Vest. LGU 19 no.21: 95-108 '64 (MIRA 18:1)

MAKAROV, P.O.

Five years of the Department of Biophysics. Vest. LGU 19 no.21:
159-160 '64 (MIRA 18:1)

MAKAROV, P.O.; MATOYAN, D.S.

Adequatometry and discretometry of a winking reflex. Biofizika 10 no.2:
297-303 '65. (MIRA 18:7)

1. Fiziologicheskii institut imeni Ukhtomskogo Leningradskogo gosudarstvennogo universiteta imeni Zhdanova.

MAKAROV, P.O.; SVYATAYA, L.P.

Adequately of the human olfactory analyzer. *Biologiya* 11
no.6:1093-1098 '65. (MIRA 1961)

1. Biologo-pochvennyy fakul'tet Leningradskogo gosudarstvennogo
universiteta imeni A.A.Zhdanova. Submitted December 15, 1964.

L 27083-66

ACC NR. AF6017430

SOURCE CODE: UR/0217/65/010/002/0297/0303

AUTHOR: Makarov, P. O.; Matoyan, D. S.ORG: Physiological Institute im. A. A. Ukhomsky, Leningrad State University im.
A. A. Zhdanov (Fiziologicheskiy institut Leningradskogo gosudarstvennogo universiteta)TITLE: Adequometry and discretometry of the winking reflexSOURCE: Biofizika, v. 10, no. 2, 1965, 297-305

TOPIC TAGS: reflex activity, animal physiology

ABSTRACT: The characteristics of two reactions (speech and the winking reflex) on irritation of the cornea of the eye with an air stream were compared. The air pressure (P) - duration of the stimulus (t) curves plotted on the basis of the speech and winking reflexes were of a hyperboloid type and could be described by equations $P = a/t + b$, where b is the rheobase and a is a constant. The thresholds of the winking reflex were considerably higher than those of sensation (as indicated by a speech response) at all values of t . The adequate chronaxy of irritation for winking and sensation inducing a speech response was 65-120 and 120-140 msec, respectively. The adequate magnitude of irritation corresponding to an energy minimum producing a response was 20-50 msec for winking and 100-140 msec for sensation (speech response). The latent period for winking at threshold stimuli for this reflex was 200 msec, independent of the characteristics of the stimulus. The minimum critical interval of dis-

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UDC: 577.3

L 27083-66

ACC NR: AP6017430

creteness for the winking reflex was 210 msec. The relations between the critical interval of discreteness and P (at constant values of t and S - the area of irritation), t (at constant values of P and S), and S (at constant values of P and t) were similar: with increasing magnitude of any of these variables, the critical interval of discreteness decreased. Orig. art. has: 5 figures and 1 formula. [JPRS]

SUB CODE: 06 / SUBM DATE: 25Aug64 / ORIG REF: 010 / OTH REF: 003

Cont 2/2 64

USSR / Farm Animals. Cattle. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7325

Author : Kokovkin, I. I.; Makarov, P. T.
Inst : Chkalov Scientific Research Institute of
Dairy and Beef Cattle Husbandry

Title : The Effect of Some Feeds upon the Quality
of Milk and Butter

Orig Pub : Tr. Chkalovskogo n.-i. in-ta molochno-myasn.
skotovodstva, 1956, vyp. 10, 327-334

Abstract : As 20 kg of the Maxim type pumpkin were fed
in addition to coarse feeds, the taste of
milk improved. The butter which was then pro-
duced, could be distinguished by a more in-
tensive coloring and better taste. The iodine
and Reichert-Meissel counts increased in milk
fat. As 30 kg of the Pepo kind pumpkin were

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S/065/62/000/010/004/004
E075/E136

AUTHORS: In'kova, N.M., Makarov, P.T., and Klement'yeva, N.F.

TITLE: Determination of sulphur in heavy petroleum products
and additives by the iodometric method

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.10, 1962,
60-62

TEXT: Deficiencies in the determination of S in heavy petroleum products by reacting barium chromate with sulphate ions were overcome by using BaCl_2 and potassium chromate solutions instead of solid barium chromate, which is not soluble in water. This modification reduced the time of S determination by a factor of 5 to 6 compared with a standard gravimetric barium sulphate method ГОСТ 1431-49 (GOST 1431-49). In the modified method an oil sample is ashed which converts any Ba present into BaCO_3 and sulphur into Na_2SO_4 . The latter is extracted with hot water and the extract made up to 100 ml. A part of the solution is treated with a standard BaCl_2 solution and the excess barium treated with an excess of standard potassium chromate solution in weakly

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Determination of sulphur in heavy ... S/065/62/000/010/004/004
E075/E136

ammoniacal medium in the presence of the precipitated BaSO_4 .
Subsequently the excess of potassium chromate is titrated
iodometrically with a standard thiosulphate solution.

ASSOCIATION: Orenburgskiy neftemaslozavod
(Orenburg Refinery)

Card 2/2

MAKAROV, P.T.; IN'KOVA, N.M.; KLEMENT'YEVA, N.P.

Determination of phosphorus in heavy petroleum products
and additives by means of the volumetric method during
ashing. Khim. i tekhn. topl. i masel 8 no.5:65-66 My '63.
(MIRA 16:8)

MAKAROV, P.T.; PERSHINA, K.Ye.

Volumetric method for the determination of zinc in zinc
dialkyl dithiophosphate. Khim. i tekhn. topl. i masel 8
no.10:62-64 0 '63. (MIRA 16:11)

1. Orenburgskiy neftemaslozavod.

IN'KOVA, N.M.; MAKAROV, P.T.; KLEMENT'YEVA, N.P.

Determining the sulfur in heavy petroleum products and additives
by the iodometric method. Khim. i tekhn. topl. i masel 7 no.10:
60-62 0'62 (MIRA 17:7)

1. Orenburgskiy neftemaslozavod.

MAKAROV, P. V.

"Demonstration of Paraneurotic Cell Alterations on Permanent Microscopic Preparations"

Dok AN, 47, No 2, 1945

CA

1.2

The distribution of thymonucleic acid in interkinetic nucleus.—F. M. Moharov (Leningrad State Univ.) *Compt. rend. acad. sci. U.R.S.S.* 54, 69-71 (1946) (in English).—A method is proposed for preserving in permanent slides, the vital microscopic structure of the interkinetic nucleus without distortion. Small pieces of the tissue to be examined, were treated for 1-6 hrs. with 0.2% to 0.5% (eth. soln.), washed, and then immersed in a 20% neutral HClO soln. for 3-5 days. Later the tissue was embedded in paraffin and stained. Nuclei from a variety of animal and plant cells were studied by this method and the conclusion was reached that thymonucleic acid was probably contained in many nuclei in a colloidal dispersed state. The accuracy of the method was shown by treating cells of known nuclear structure and observing these same structures on preps. treated by the proposed method. Applications of these results to the theories of cell structure are briefly discussed and the conclusion was reached that the homogeneity of the nucleus is a real, rather than an apparent one. (L. Webster)

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

RDEN DIVISION

RDEN DIVISION

RDEN DIVISION

MAKAROV, P. V.

"Formation of the Chromosomes De Novo under Experimental Conditions"

Dok AN, 54, No 2, 1946

MAXIMOV, P. V.

"The Type of ... between ...
... (1. 11) ... P. V."

CC: General ... 5 (1988).

MAKAROV, F. V.

PA 66T89

USSR/Medicine - Stains and Staining
Medicine - Bacteriology

Mar/Apr 1948

"In Vivo Staining as a Method of Diagnosing Anaerobic Infections," P. V. Makarov, Chair of Gen Biol, Second Leningrad Med Inst, 4 pp

"Arkhir Patologii" Vol X, No 2

Method is characterized as simple, requiring no special equipment other than microscope and renders bacteriological analysis possible in 1-1 1/2 hours after obtaining the specimen. Submitted 1947.

66T89

MAKAROV, P. V.

Makarov, P. V. "The role of Soviet colonialists in the study of Collière's apparatus", Vestnik Leningr. un-ta, 1948, No. 12, p. 33-35, - i 11 : . 33-35.

SC: U-4631, 16 Sept. 53, (Ietoris 'in rnal 'nyko State, No. 24, 1949).

MAKAROV, P. V.

PA 11/49T56

USSR/Medicine - Nervous System
Medicine - Irritation

Jul 48

"Changes in the Structure of the Nucleus of Ganglia
Due to the Influence of Various Types of Irritations"
P. V. Makarov, Leningrad State U, 4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 2

Describes effect of irritations on frog's ganglia,
fixed by osmium tetroxide. Illustrates results by
microphotographs. They establish dynamic nature of
nuclear structure and neoplasm produced by various
stimulants being reversible. Submitted 7 May 48.

11/49T56

MAKAROV, F. V.

24026 MAKAROV, F. V. Stroyeniye kletochnogo yadra i metody ego izucheniya.
Trudy Akad. Med. Nauk SSSR, T. III, 1966, S. 20-25.

SC: Letopis, No. 32, 1966.

MAKAROV, I. V.

"Physico-chemical Properties Of Tissues And Methods For Their Study." (1948)

Makarov, I. V. (Leningrad, 1948. 323 pages) Reviewed by Kremiansky, V. I.

SO: PROGRESS OF CONTEMPORARY BIOLOGY (U.S. Soviet Biol) Vol. XXVII 1949 No. 1 (Jan.-Feb.)

1. MAKAROV, P. V.

2. USSR. (600)

4. Science

7. New successes in Soviet biology. Stenogr. publ. letsi. Leningrad, 1951.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.

MAKAROV, P.V.

Critical analysis of reduction division; experimental-morphological investigation of spermatogenous cells in Amphibia. Arkh. anat., Moskva 19 no.1:48-70 Jan-Feb 52. (CIML 21:5)

1. Corresponding member of the Academy of Medical Sciences USSR, Professor. 2. Of the Department of Biology of Leningrad Sanitary-Hygienic Medical Institute and of the Laboratory of Cytology of Leningrad State University.

MAKAROV, P.V.

[Fundamentals of cytology] Osnovy tsitologii. Moskva, "Sovetskaya
nauka", 1953. 530 p. (MIRA 7:4)
(Cells)

MAKAROV, P. V.

Nematoda

Cytology of reproduction in *Ascaris megalocephala*; on the morphology of impregnation in accordance with Lysenko's theory of assimilation. *Izv. AN SSSR Ser. biol.* No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

MACAROV, P.V. [Makarov, P.V.]

The cytology of the fecundation process (*Ascaris megalocephala*).
Analele biol 8 no.1:49-64 Ja-Mr '54.

MAKAROV, F. V.

N/5
631
.M2
1946

OBSHCHAYA BIOLOGIYA; UCHEBNIK DLYA STUDENTOV MEDITSINSKIH INSTITUTOV (GENERAL BIOLOGY, BY) V. V. MAKHOVKO I P. V. MAKAROV. 2. IZD. MOSKVA, MEDGIZ, 1956. 531 p. ILLUS. BIBLIOGRAPHICAL FOOTNOTES.

FRANKOV, F. V.

"Cytological and cytochemical investigations of developing eggs of *Ascaris*"
a paper presented at the International Congress on Biology of Growth, Brown
University, Providence, R. I. from 23 to 25 July 1956.

USSR / General Biology. Individual Development.
Reproductive Cells.

B-4

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81000.

Author : Makarov, P. V.

Inst : ~~Not given.~~

Title : Investigation of Gametogenesis in the Equine
Ascarid in Connection with the Problem of the
Reduction Division.

Orig Pub: Zh. obshch. biologii, 1956, 17, No 3, 185-201.

Abstract: On the basis of new investigation of gametogenesis,
there is described the preparation to the meiosis
and the process of division in the maturing ascarid.
In the nucleus of the spermatocyte I of the strain
univalens, a single corpuscle is formed from the
chromatin and is designated by the author as cary-
osome. Later on there appear a few nucleoli, which
fuse into a single nucleolus, and the nuclear net-

Card 1/4

Chair of General Biology, Leningrad, Leningrad University
Medical 10 Inst.

USSR / General Biology. Individual Development.
Reproductive Cells.

B-4

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81000.

Abstract: work, that, in the author's opinion, seems to be the result of the coagulative action of the fixative. In the caryosome, a process of polarization of chromatin begins, that leads to the development of two, and later on four, corpuscles - tetrads. In the strain bivalens of the spermatocyte I, one chromosome and a considerable number of chromatin chunks are formed, that are gradually dissolved, in consequence of which the author discerns a diminution of chromatin, in a manner of its own. The caryosome stretches out and develops two polar masses of DNA, which are joined together by numerous crosspieces. In each pile, at first two and later on four sections are individualized. Two tetrads are obtained. The

Card 2/4

USSR / General Biology. Individual Development.
Reproductive Cells.

B-4

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81000.

Abstract: elements of the tetrads of both strains are, at all times, connected together by crosspieces of a substance, containing DNA, which confirms the origin of the tetrads from a single caryosome. At the division maturity, the distribution of the chromatin is not always uniform. The spermatide usually contain about two chromosomes, but sometimes only one or three. The chromatin of spermatocytes contains not only DNA but also RNA. At the formation of spermatids, RNA emerges from the chromatin and afterwards from the body of the spermatid. The development of tetrads in oocytes occurs, on the whole, in the same manner as in spermatocytes. On the basis of these operations,

Card 3/4

IN REPLY TO: 7/1

USSR/General Biology. General Physiology. Biochemistry, and Biophysics. B-1

Abs Jour: Ref. Zh.-Biol., No 9, 1957, 35024

Author : Makarov, P.V.

Inst :

Title : The Theory of Constancy of Desoxyribonucleic Acid in the Cell
and a Criticism of the Theory.

Orig Pub: Uspekhi sovrem. biologii, 1956, 41, No 1, 3-25

Abstract: A critical review of the research on the content of DNA in the cell. The author maintains that the theory of the constancy of the content of DNA in the nuclei meets a number of difficulties connected with the fluctuation of the quantity of DNA in the cells of various tissues of the same animal, depending particularly on the physiological condition of the cell; it is shown in the disappearance of DNA in the course of cogensis, in the pronucleus, and in several stages of the decay and embryological development of some animals. The decisions ad-

Card : 1/2

-1-

USSR/General Biology. General Physiology. Biochemistry, and Biophysics. B-1

Abs Jour: Ref. Zh.-Biol., No 9, 1957, 35024

vanced by the partisans of the constancy of DNA concerning the role of polyploid and polytenic tissues seems arbitrary and unconvincing to the author. However, he concludes with the assertion that "In adult organisms, the quantity of DNA in the nuclei, in constant environment, is evidently more or less stable; however, this circumstance can by no means serve as a support for the theory of the constancy of DNA..." A bibliography of 97 titles.

Card : 2/2

-2-

USSR / General Biology. Physical and Chemical Biology

B-1

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 190

Author : Makarov, P.V.

Inst : Not Given

Title : Some Problems in Cytochemistry of Nucleic Acids

Orig Pub : Uspekhi sovrem. biologii, 1956, 42, No 3, 289-303

Abstract : This is a review of studies devoted to the role of nucleic acids (chiefly ribonucleic acid RNA) in cellular activity. The question of inter-conversion of RNA and deoxyribonucleic acid DNA, of partial or total synthesis of nucleic acids, of the functional significance of RNA in the processes of cell growth and protein synthesis are clarified. The author considers Kaspersson's theory of the nucleus as the center of protein synthesis as insufficiently proven. He also considers concepts of existence of chromatin surrounding the nucleus, as well as the presence of a connection between the nucleus and the synthetic processes within the cell, not proven. The author cites data denoting the role of RNA as an energy substance, necessary to the normal flow of synthetic processes. At the same time a concept is presented of the role of RNA as

Card : 1/1 a matrix for protein formation. Bibl. 102 refs.

MAKAROV Petr Vasil'yevich
MAKAROV, Petr Vasil'yevich, prof.; BERNUMOV, G.M.; red. GUBIN, M.I.,
tekhn.red.

[Some problems of modern cytology] "nekotorye problemy sovremennoi
tsitologii. Moskva, Izd-vo "Znanie," 1957. 31 p. (Vsesoiuznoe
obshchestvo po rasprostraneniю politicheskikh i nauchnykh znaniy.
Ser. 8, no.40) (MIRA 11:2)

1. Chlen-korrespondent AMN SSSR. (for Makarov)
(CYTOLOGY)

USSR / General Biology. Cytology. General Cytology. B

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14208

Author : Kozlov, V. Ye.; Makarov, P. V.

Inst : Leningrad University

Title : A Review by K. Yu. Kostryukova of the
Article "The Nature of Forming Processes in
a Substance Isolated from Cells"

Orig Pub : Vestn. Leningr. un-ta, 1957, No 3, 137-138

Abstract : No abstract given

Card 1/1

11

MAKAROV, I. I.

at the International Congress on the Biology of Development. Amer.
anat. hist. 1 embr. 34 no. 1: 121-122 My-Je '67. (MIRA 10:10)

1. adres avtora: Leningrad, ul. Kurakina, d.1/3, Leningradskiy
sovetno-gigiyenicheskiy meditsinskiy institut, kafedra biologii.
(BIOLOGY)

MAKAROV, P.V.

MAKAROV, P.V. (Leningrad, ul. Yegorova, d.18, kv. 45)

Some aspects of the development of cytology in the U.S.S.R. during
the last 40 years. Arkh.anat.gist. i embr. 34 no.4:25-36 J1-Ag '57.
(MIRA 10:11)

(CYTOLOGY, history,
in Russia (Rus))

MAKAROV, P.V.

Cytological and cytochemical investigations of developing eggs of
Parascaris equorum [with summary in English]. Zhur.ob.biol. 19
no.5:338-347 8-0 '58 (MIRA 11:10)

1. Kafedra obshchey biologii Leningradskogo sanitarno-gigiyenicheskogo
meditsinskogo instituta i laboratoriya tsitologii Leningradskogo universi-
teta.

(ASCARIDS AND ASCARIASIS)
(DESOXYRIBONUCLEIC ACID)

MAKAROV, P. V.

30-1-34/39

AUTHOR: Kushner, Kh. F. , Doctor of Biological Sciences

TITLE: The Problem of Heredity and Variability (Problema nasledstvennosti i izmenchivosti) Conference Held at the Institute of Genetics (Konferentsiya v institute genetiki)

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 127 - 129 (USSR)

ABSTRACT: The conference on this problem took place from October 8, to October 14, 1957, at the Institute for Genetics AN USSR. It was attended by collaborators of scientific institutes and by the representatives of 50 other institutions of the country, among them Vaskhnil, the University of Moscow, the Academy of Medical Sciences of the USSR, and many others. The total attendance amounted to more than 1000 persons. The following lectures were delivered:

- 1) T. D. Lysenko: On the rules governing the life of biological species and their importance in practice.
- 2) N. I. Nuzhdin: On the material carriers of heredity.
- 3) K. S. Sukhov: Genetical problems connected with virus research.
- 4) P. V. Makarov: Cytological and cytochemical changes of the gametes in the course of fecundation or impregnation
- 5) S. M. Sarkisyan: The participation of the organism of the mother and its cytoplasm in the determination of a num-

Card ~~1~~

MAKAROV, P.V. (Leningrad, ul. Yegorova, d. 18, kv. 45)

Recent data on the structure and properties of the cell nucleus.
Arkhnat.gist. 1 embr. 35 no.6:3-21 N-D '58. (MIRA 12:1)
(CELL NUCLEUS,
review (Rus)

AUTHOR: Makarov, P. V.

SOV/ 20-120-2-54/63

TITLE: The Distribution of Polysaccharides in the Course of Gametogenesis, Fertilization and Cleavage of the Egg of Parascaris Equorum (Dinamika polisakharidov v khode gametogeneza, oplodotvoreniya i drobleniya yaita Parascaris equorum)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, Nr 2, pp. 412-414 (USSR)

ABSTRACT: During the last years the attention of research-workers has been drawn to the problem of the localisation of polysaccharides in the cell (references 1-3). As far as the author is informed such a classical object as the parascaris equorum has never been investigated up to now. It is the aim of this paper to close that gap. In the introduction data and methodology are described, and later on the gametogenesis. Young oöcytes contain no polysaccharides. Only when they have reached a prismatic shape these substances appear on the radius around the rachis. The first inclusions become visible in the range above and below the nucleus. At that time no polysaccharides are proved in the rachis,

Card ~~1-2~~

The Distribution of Polysaccharides in the Course of SOV, 20-120-2-54/63
Gametogenesis, Fertilization and Cleavage of the Egg
of Parascaris Equorum

although there are large amounts of them in the wall of the ovary. They apparently enter the oöcytes not at the apical but at the basal pole. With increasing growth the amount of polysaccharides in the oöcytes increases (figure 1,1). Towards the period of fertilization the cytoplasm of the oöcytes is overcrowded with them (figs. 1,3). At the study of the testicles no polysaccharides could be proved in the spermatogonia, spermatocytes or spermatids. Also completely developed spermatozoons have no polysaccharides. According to these features the parascaris differs from all other animals, for example from the mammals. In the course of fertilization the amount of polysaccharides decreases rapidly after the spermatozoon has entered (fig. 1,4). After the second maturity division is finished, and after the beginning of the pronucleus formation, polysaccharides appear in the egg again. The lipides are obviously their source now. Thus the zygote contains quite a lot of polysaccharides during the interphase which are regularly

Card 2/4

The Distribution of Polysaccharides in the Course of
Gametogenesis, Fertilization and Cleavage of the Egg
of Parascaris Equorum

distributed in the cytoplasm. The pronuclei contain none. The amount of polysaccharides remains unchanged during the early prophase of the first cleavage. It increases during the late prophase and reaches a climax during the metaphase (figs. 1,8). The amount of polysaccharides in the two blastomeres remains high and increases in the course of further cleavages. There are 1 figure and 7 references, 6 of which are Soviet.

ASSOCIATION: Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut (Leningrad Medical Institute for Hygiene and Sanitation)

PRESENTED: February 10, 1958, by Ye. N. Pavlovskiy, Member, Academy of Sciences USSR

SUBMITTED: February 8, 1958

Card 1

MAKAROV, P.V. (Leningrad, L-52, ul. Yegorova, 18, kv.45)

Among Chinese morphologists. Arkh.anat.gist.i embr. 37 no.10:121-125
0 '59. (MIRA 13:4)

(MORPHOLOGY)

MAKAROV, P.V.

Some features of modifications in nucleic acids and proteins in
the early embryogenesis of animals. Trudy LSGMI 43:7-14 '59.
(MIRA 13:5)

(NUCLEIC ACIDS)

(PROTEINS)

MAKAROV, P.V.

Recent data from a cytochemical analysis of the developing eggs
of *Ascaris equorum*. Trudy LSGMI 43:47-63 '59. (MIRA 13:5)
(ASCARIDS AND ASCARIASIS) (OVUM)

GRUSHVITSKIY, I.V.; RAZUMOV, S.A.; MAKAROV, P.V., nauchnyy red.;
VOROB'YEV, G.S., red.izd-va; GURDZHIYEVA, A.M., tekhn.red.

[Biology and religion] Biologiya i religiya. Leningrad, Ob-vo
po rasprostraneniю polit. i nauchn.znaniy RSFSR. Leningr.otd-nie,
1960. 70 p. (MIRA 13:7)

1. Chlen-korrespondent AMN SSSR (for Makarov).
(Biology) (Religion)

MAKAROV, P. V.

"The Problem of the Connection Between Nucleic Acids and Proteins
in the Light of Cytological Analysis."

report submitted for the First Conference on the problems of Cyto and
Histochemistry, Moscow, 19-21 Dec 1960.

Cytology Laboratory of Leningrad State University Imeni A. A. Zhdanov and the Chair of ~~XXXX~~
General Biology of Leningrad Sanitary-Hygienic Medical Institute, Leningrad.

MAKAROV

P.V.

- MAKAROV, V. Ya. "The nucleic acids of the nerve cell's nucleus and cytoplasm"
- MAKAROV, V. Ya., VIKTOROV, V. V. and SHUBOVITS, M. Ya. "Histology of embryonic connective tissue in pathological conditions"
- MAKAROV, V. Ya. "Some aspects of carbohydrate metabolism of the transitional epithelium"
- MAKAROV, V. Ya. "The studies on the cell's secretory proteins with the aid of pneumolysin"
- MAKAROV, V. Ya., KOSHEV, M. B., KOSHEV, V. A., MAKAROV, V. Ya. and GUTKIN, A. V. "Ultraviolet fluorescence microscopy as a new field of histochemistry"
- MAKAROV, V. Ya. "Histochemical characteristics of diphtheric polyneuritis"
- MAKAROV, V. Ya. "The determination of sulfhydryl groups of proteins by means of the inhibitory indicator (bromocetylthiobenzoic acid) method"
- MAKAROV, V. Ya. "Cytological and autoradiographic analysis of the role of nucleic acids in the synthesis of cellular proteins"
- MAKAROV, V. Ya. "The evolution of the protein-synthesizing apparatus of connective tissue in the development of embryonic processes"
- MAKAROV, V. Ya. "Histochemical contribution to the study of the morpho-physiological secretion"
- MAKAROV, V. Ya. "Some mechanisms controlling the chemical activity of the neuron mitochondria"
- (A summary of this report has been received by the organizers of the Congress and is included in Group I)
- Aspects of histochemistry and the nervous system (this is a proposed report of which the exact title is not yet known. It is listed by general subject matter under Group III)
- MAKAROV, V. Ya. "Histochemistry in experimental sugar chemistry"
- MAKAROV, V. Ya. "Comparative histochemistry of tissues differing in their content of nucleoproteins"
- MAKAROV, V. Ya. "The histochemical study of the physiological importance and cytochemical and cytophysical peculiarities of nerve tissues biological organization"
- MAKAROV, V. Ya. "Histochemical examinations of connective tissues in the light of recent pathological studies"
- MAKAROV, V. Ya. "A comparative physical and chemical characteristic of procollagen and collagenoses"
- MAKAROV, V. Ya. "Histochemical studies of the connective tissue, changes observed in the course of development of connective tissue in early embryonic stages"
- MAKAROV, V. Ya. "Protein and nucleic composition of embryonic structures"
- MAKAROV, V. Ya. and KOSHEV, M. B. "On the role of cell nucleus and its fractions in protein biosynthesis measured by the incorporation of labeled amino acids"

A Makarov's report presented at the Congress.